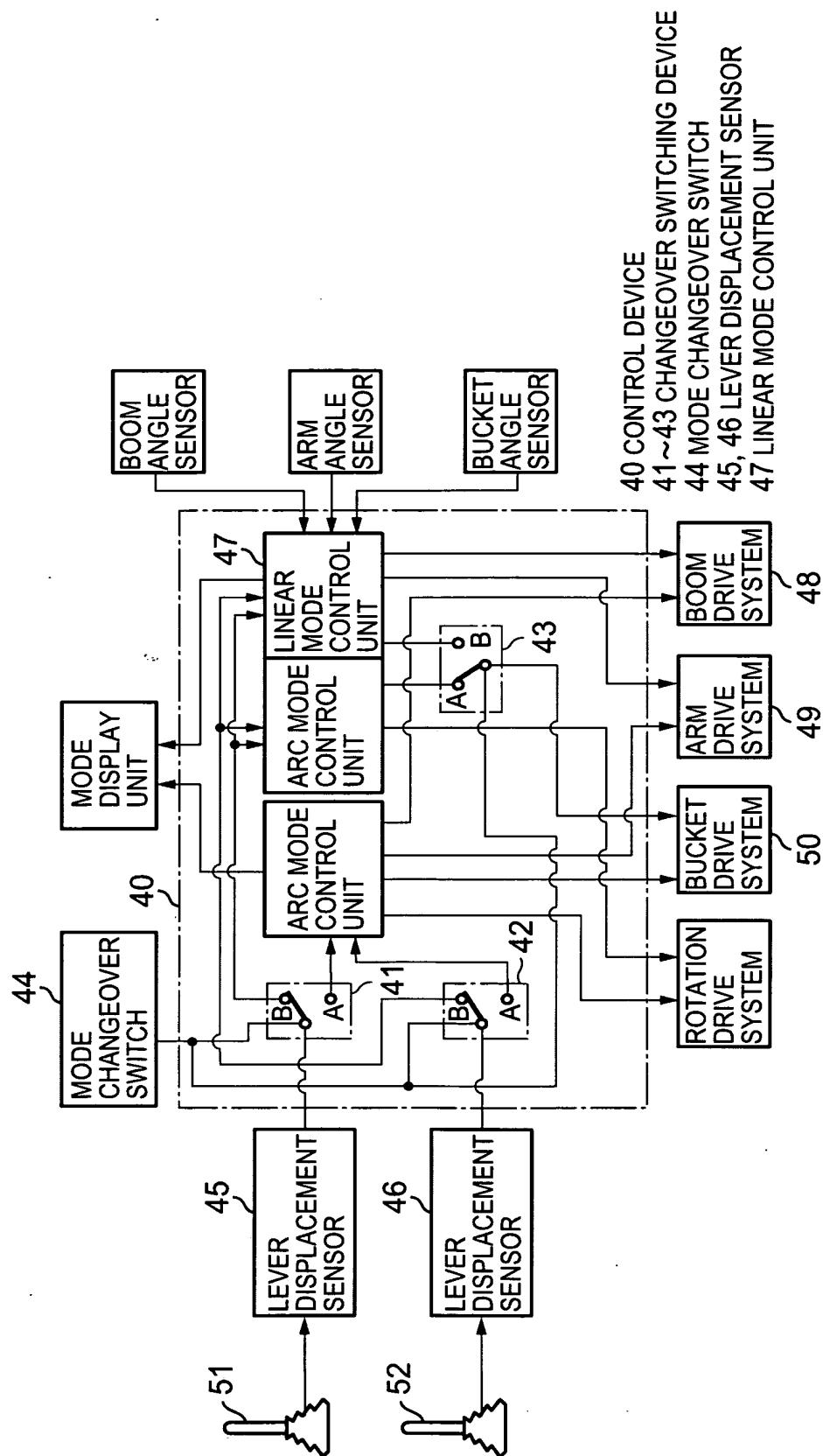
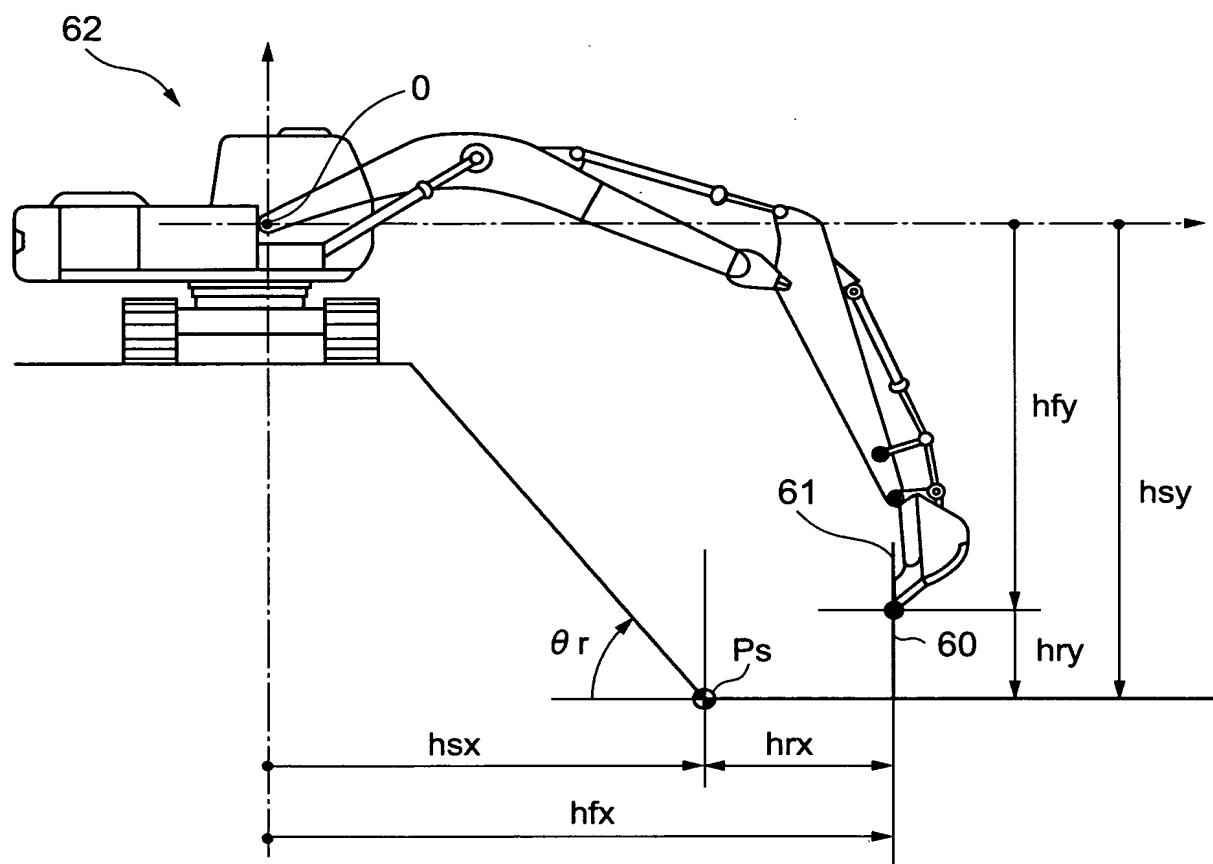


**FIG. 1**  
PRIOR ART

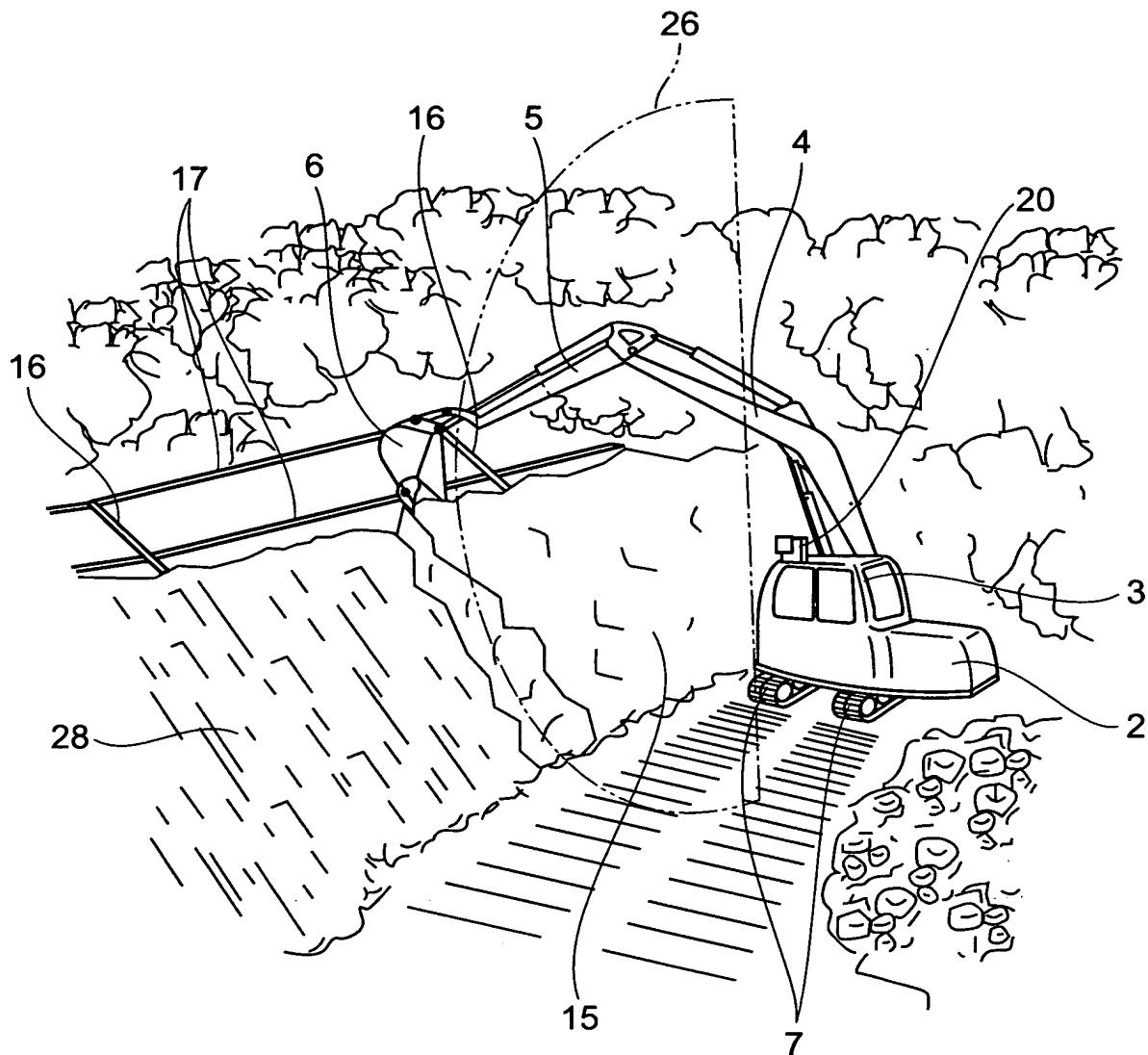


## FIG. 2 PRIOR ART



60 EXTERNAL REFERENCE  
61 FRONT REFERENCE  
62 VEHICLE BODY

FIG. 3



2 UPPER ROTATING BODY  
3 OPERATOR'S CABIN  
5 ARM  
6 BUCKET  
7 LOWER TRAVELING BODY

15 CONSTRUCTION SURFACE  
16 STAKE  
17 CORD  
20 DISTANCE MEASUREMENT DEVICE  
26 SCANNING REGION

FIG. 4

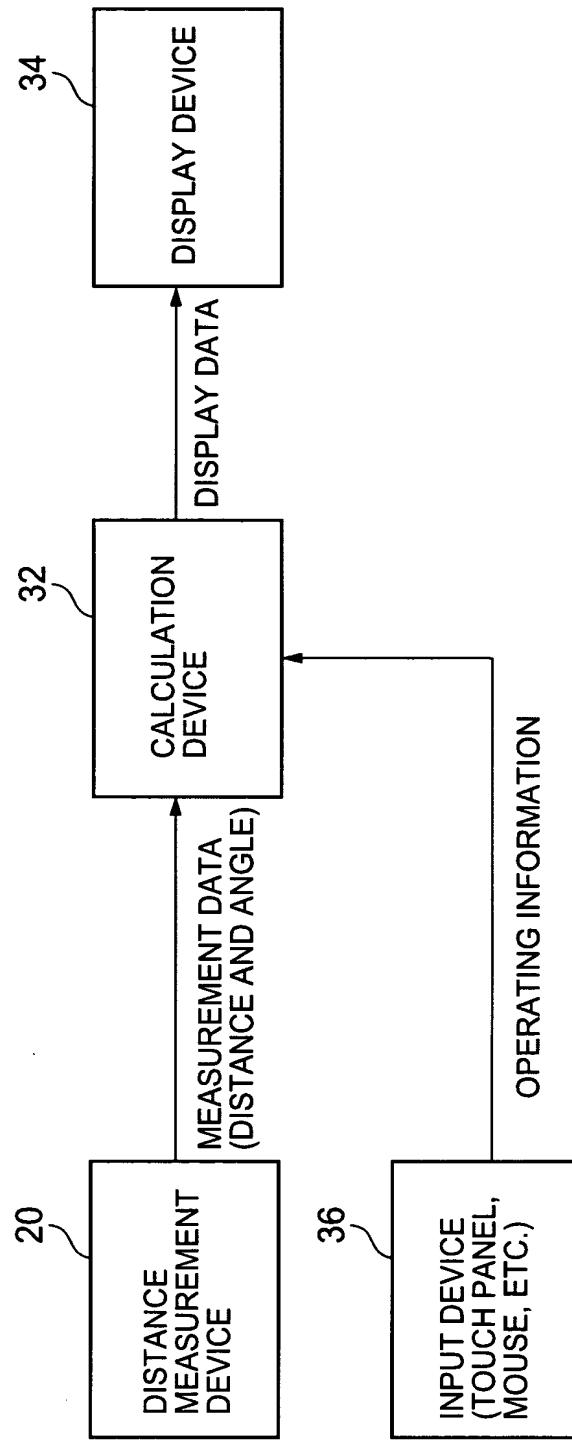
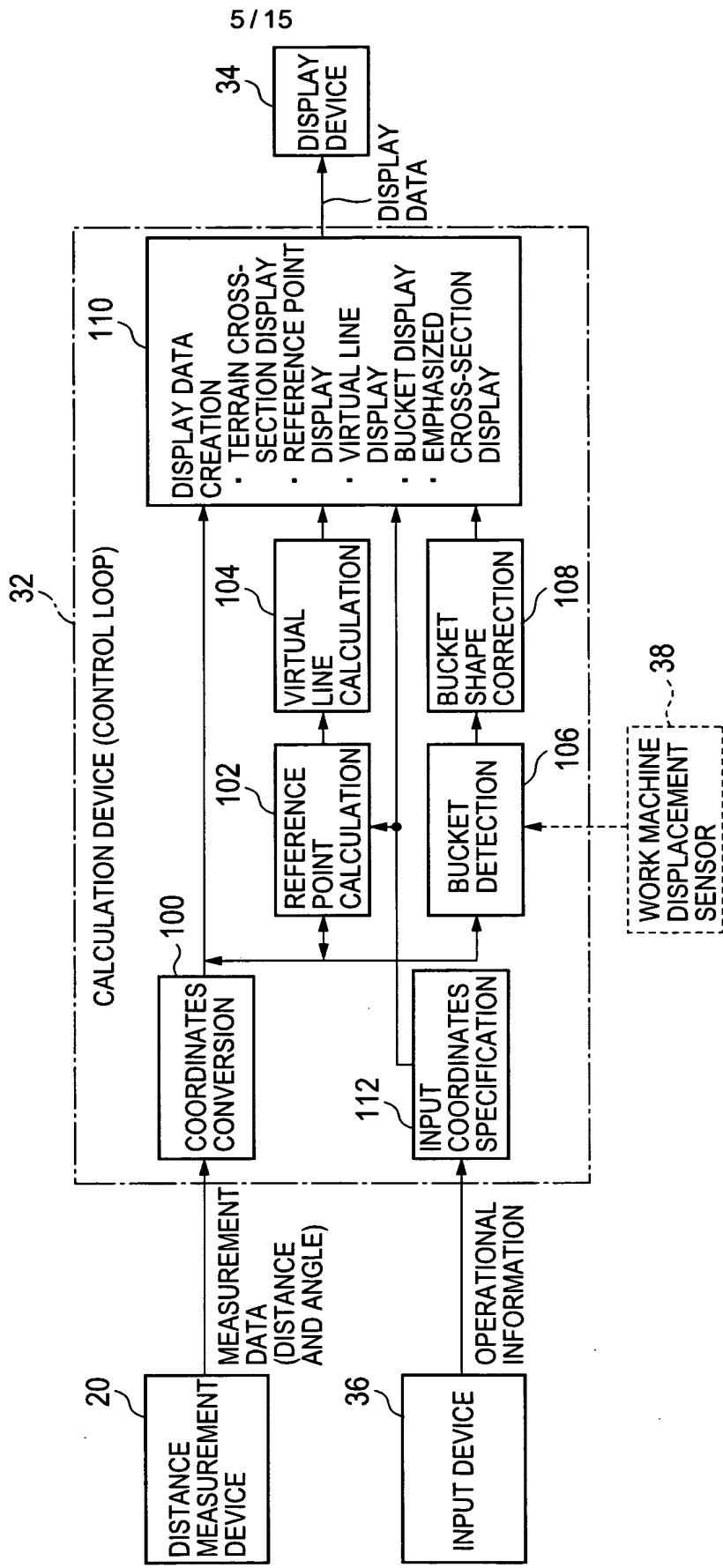
30 CONSTRUCTION TARGET INDICATOR DEVICE

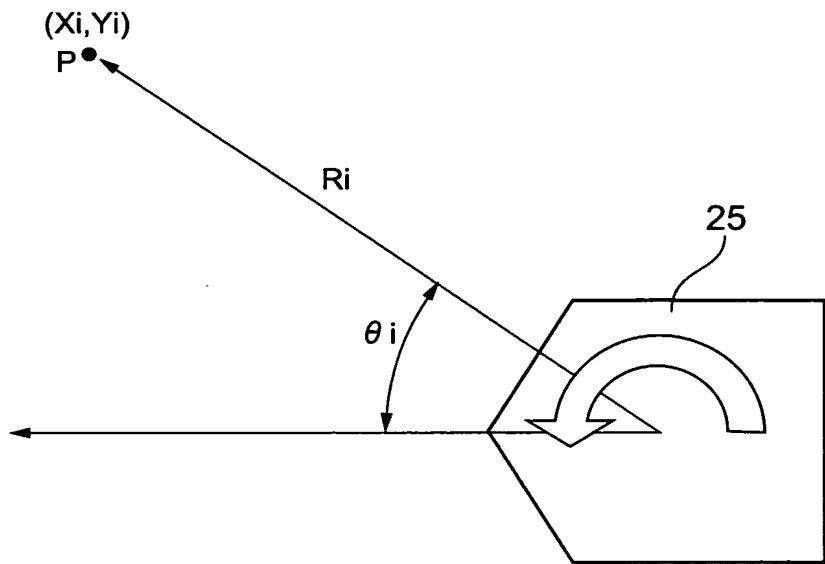
FIG. 5

## 30 CONSTRUCTION TARGET INDICATOR DEVICE



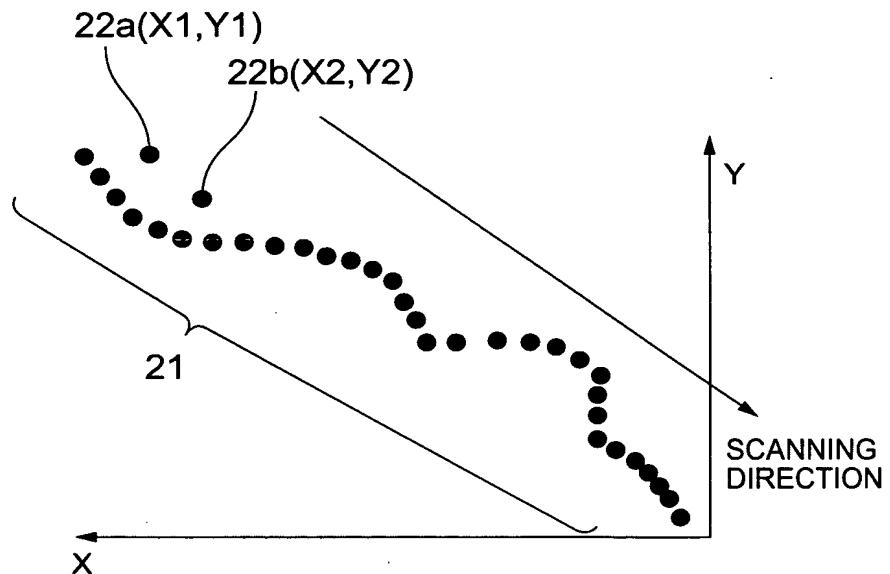
6/15

FIG. 6



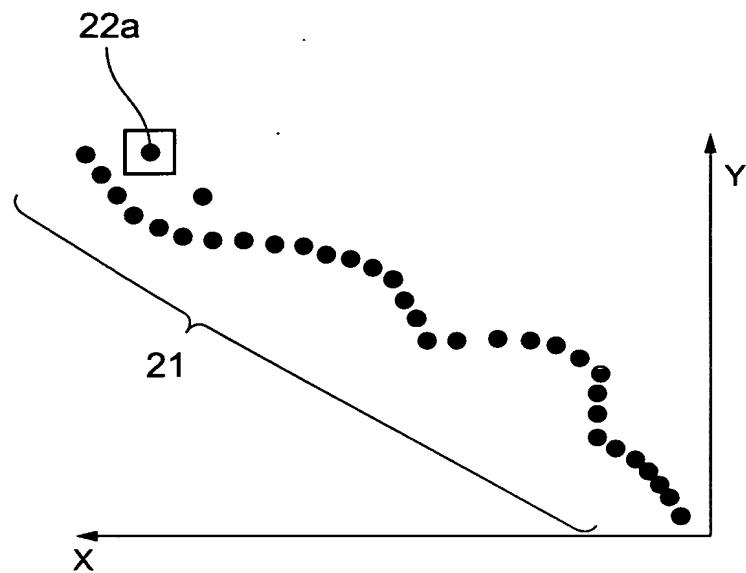
25 LASER DISTANCE MEASUREMENT DEVICE

FIG. 7

21 POSITION DATA OF CROSS-SECTION OF TERRAIN  
22a, 22b REFERENCE MARKER (CORD)

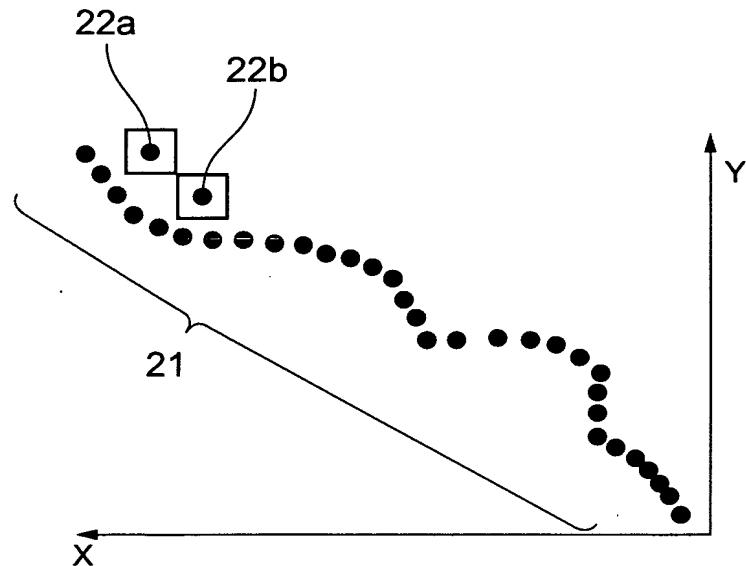
7/15

FIG. 8



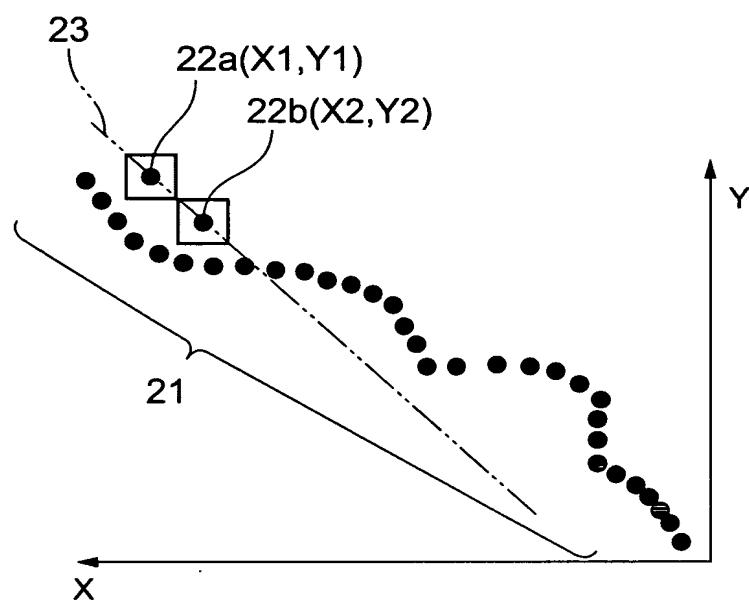
21 POSITION DATA OF CROSS-SECTION OF TERRAIN  
22a REFERENCE POINT

FIG. 9



21 POSITION DATA OF CROSS-SECTION OF TERRAIN  
22a, 22b REFERENCE POINT

FIG. 10



21 POSITION DATA OF CROSS-SECTION OF TERRAIN  
22a, 22b REFERENCE POINT  
23 VIRTUAL LINE

FIG. 11

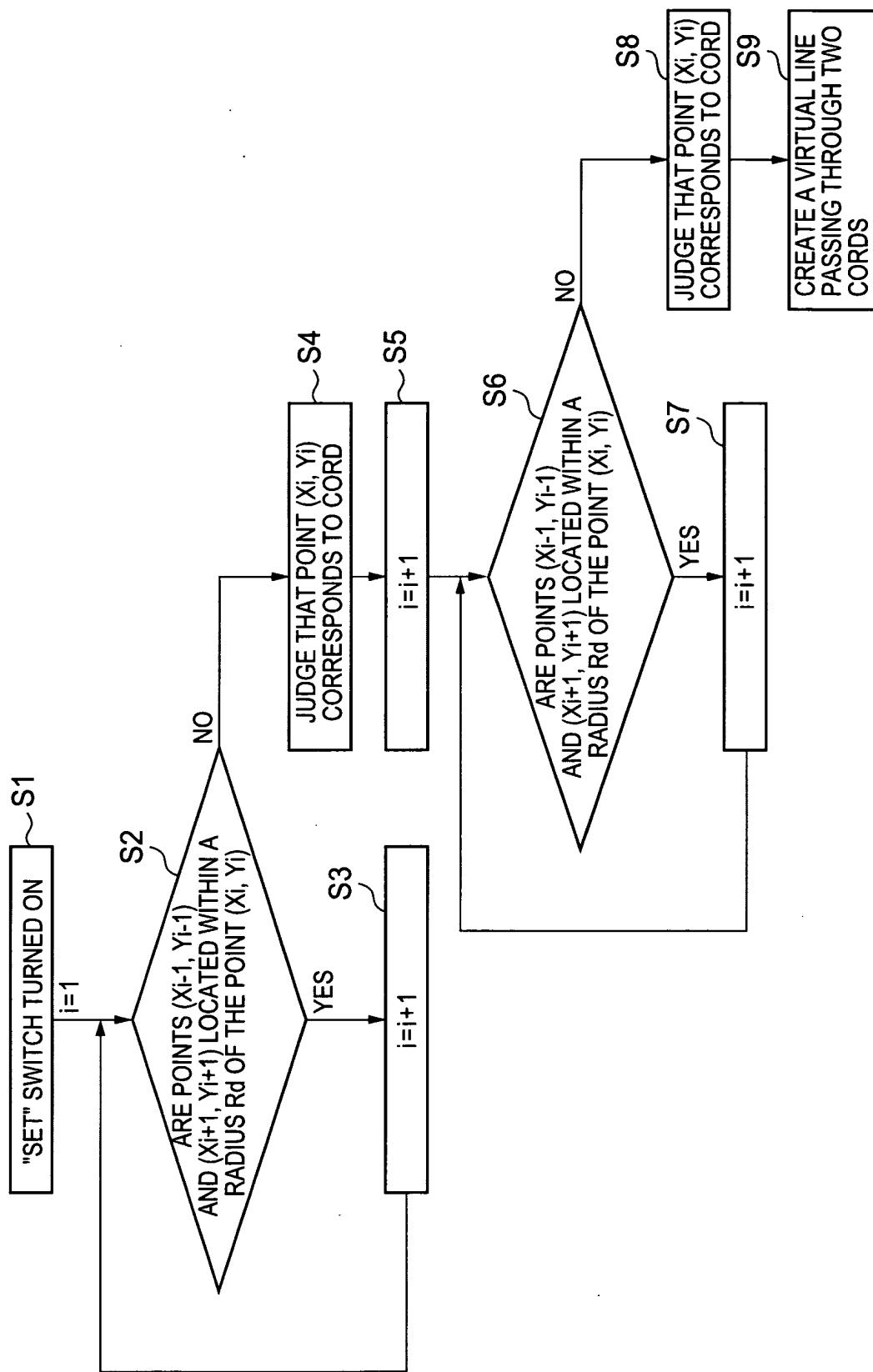


FIG. 12

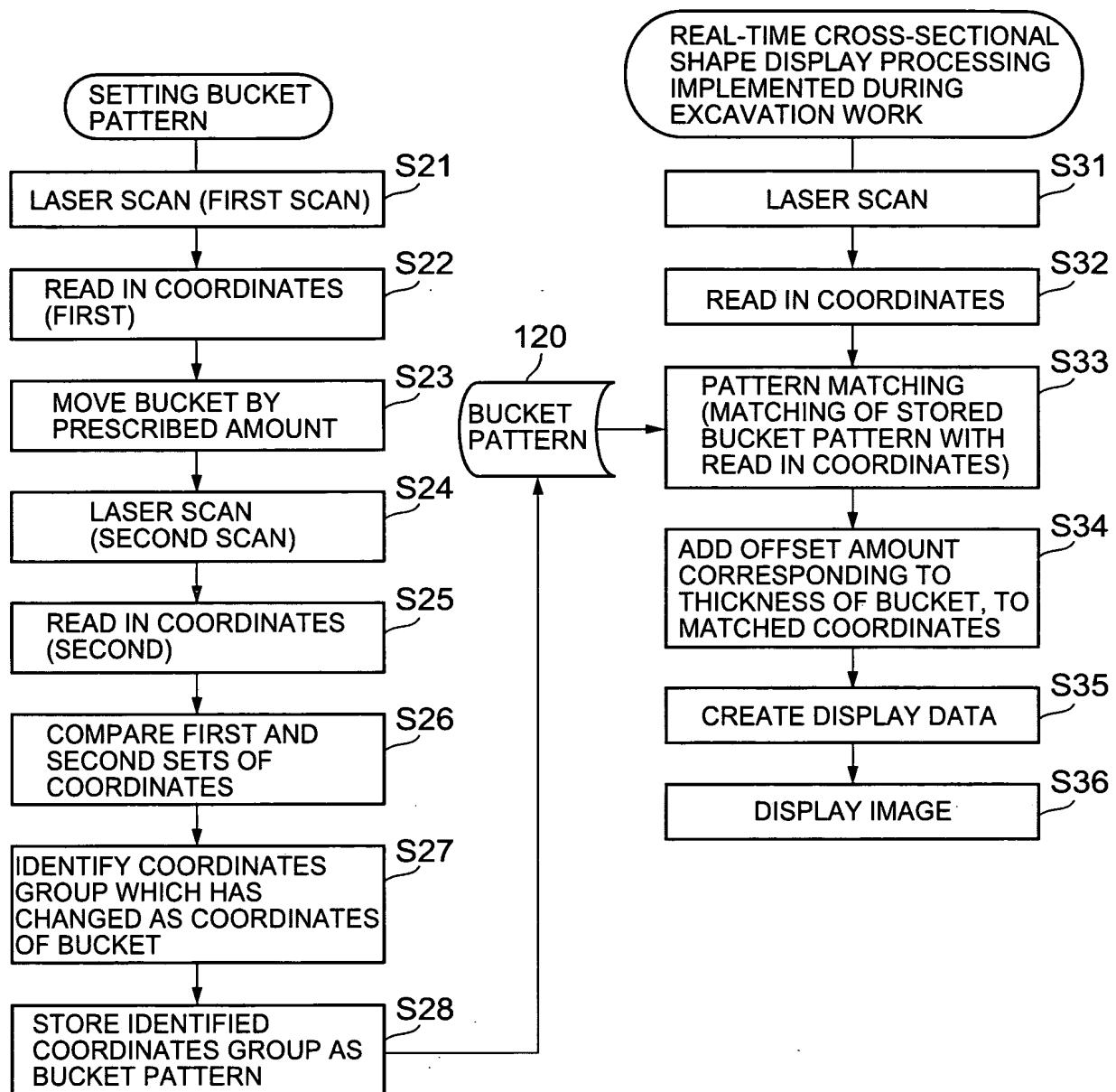


FIG. 13

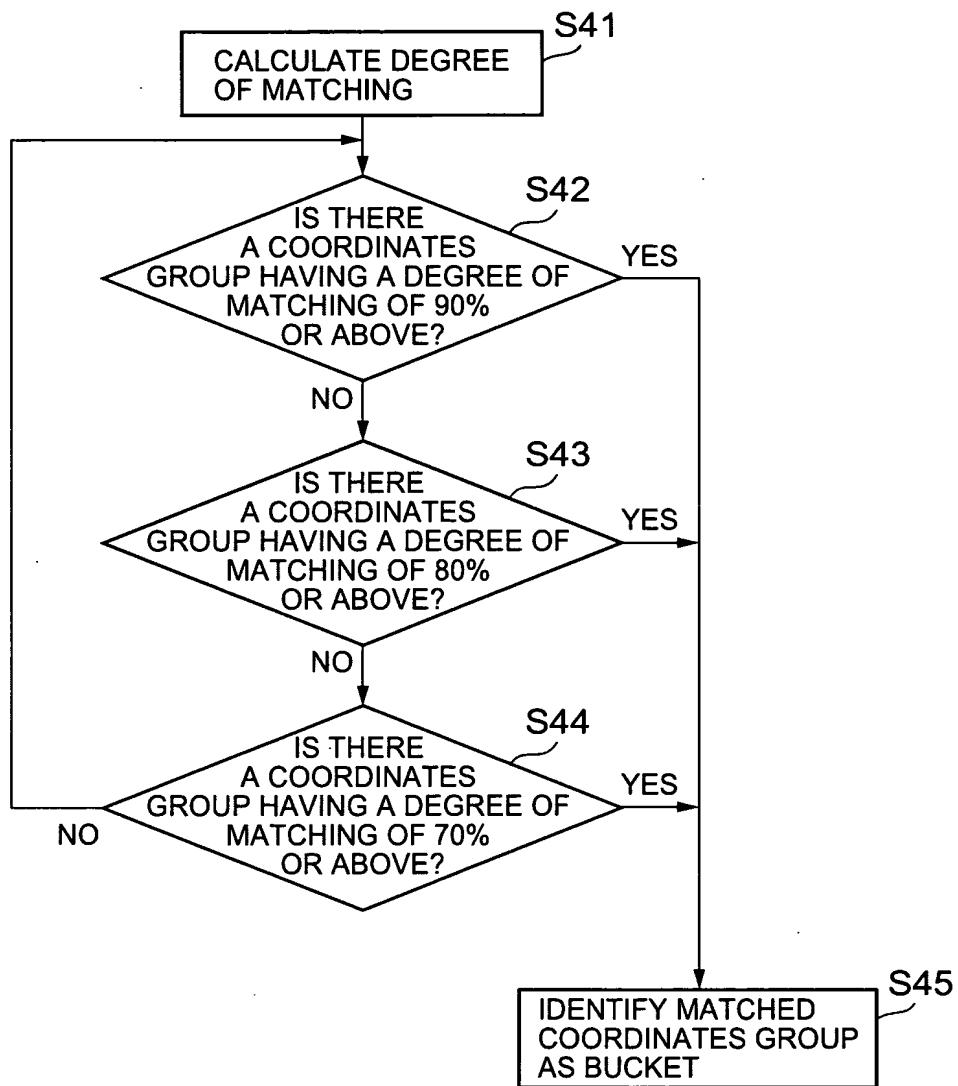
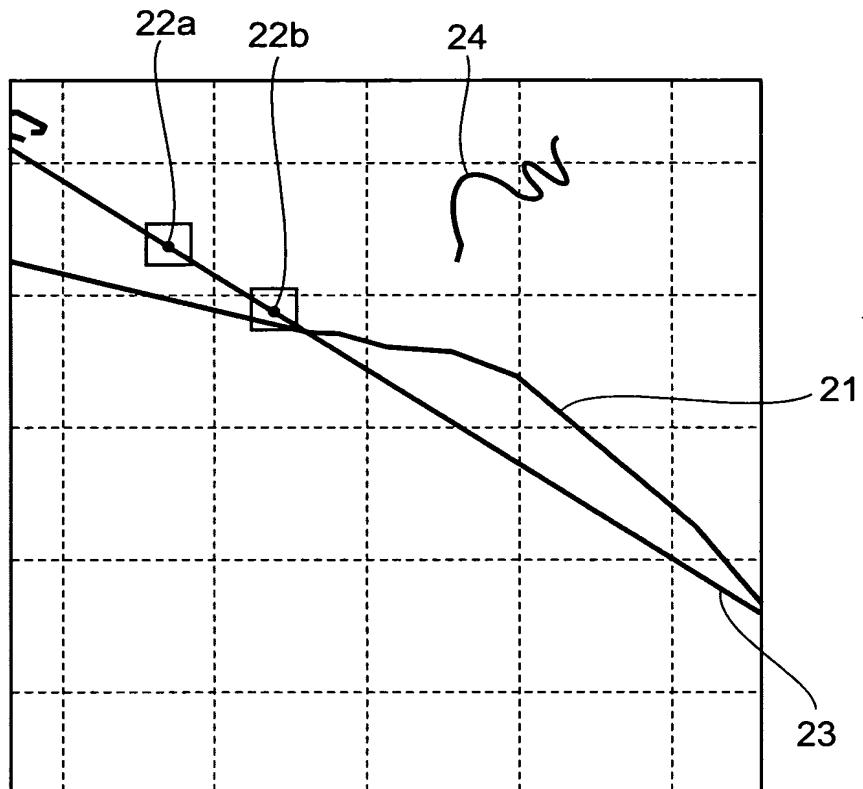
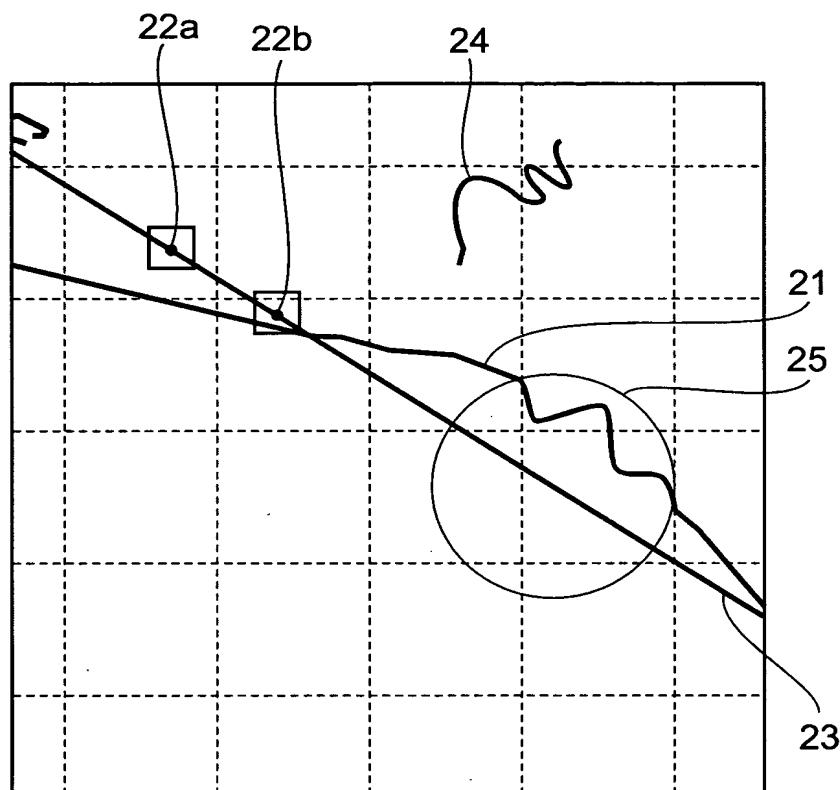


FIG. 14



21 POSITIONAL DATA OF CROSS-SECTION OF TERRAIN  
22a, 22b REFERENCE POINT  
23 VIRTUAL LINE  
24 POSITIONAL DATA OF CROSS-SECTION OF BUCKET

FIG. 15



21 POSITIONAL DATA OF CROSS-SECTION OF TERRAIN

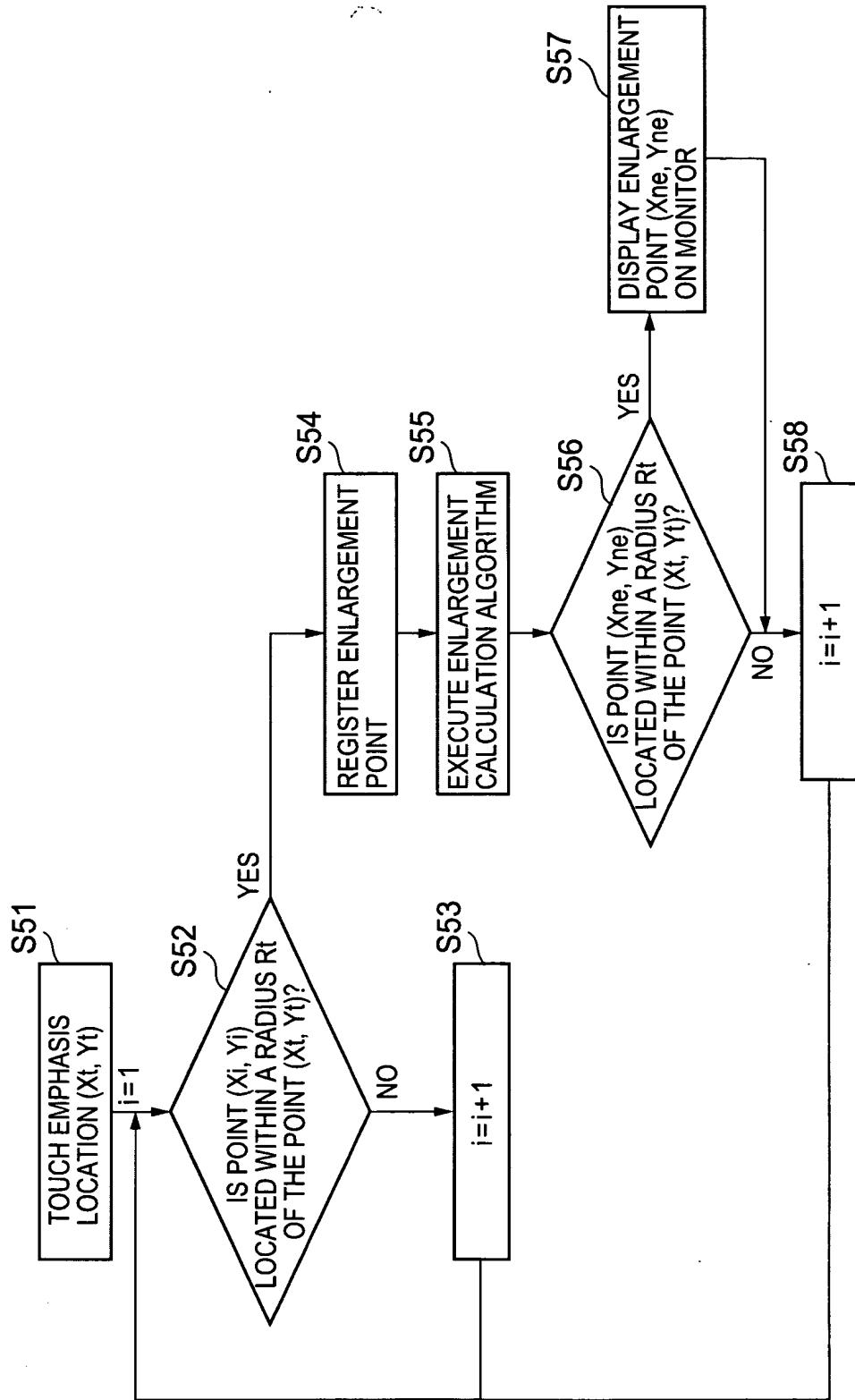
22a, 22b REFERENCE POINT

23 VIRTUAL LINE

24 POSITIONAL DATA OF CROSS-SECTION OF BUCKET

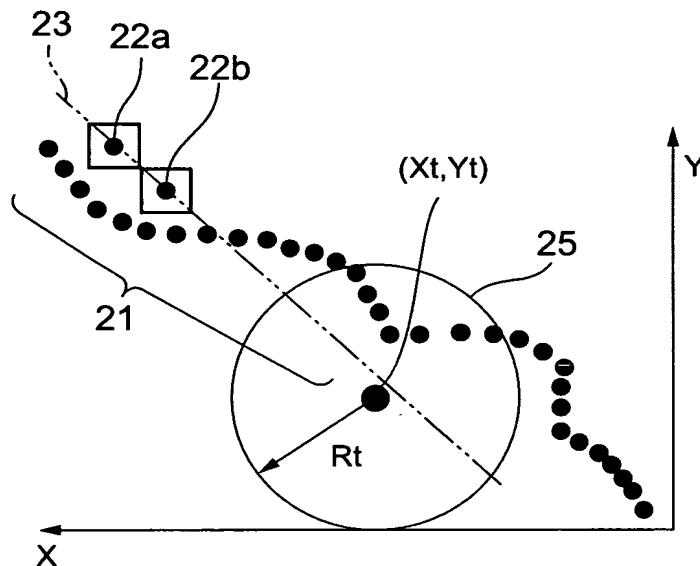
25 ENLARGED DISPLAY REGION

FIG. 16



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FIG. 17

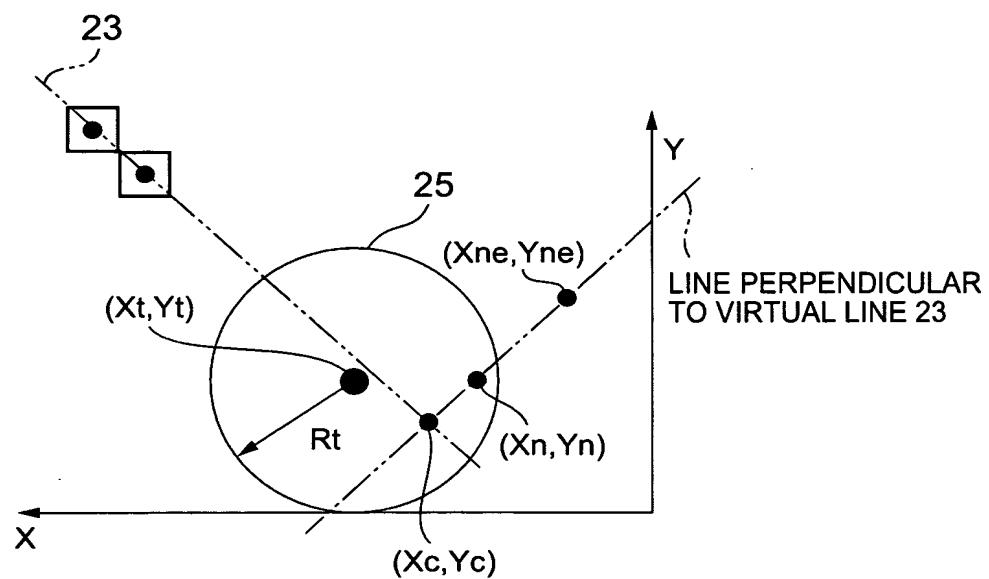


21 POSITIONAL DATA OF CROSS-SECTION OF TERRAIN

22a, 22b REFERENCE POINT

23 VIRTUAL LINE

FIG. 18



23 VIRTUAL LINE